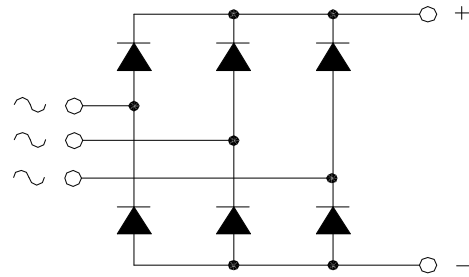


MTS90

POWER RECTIFIER BRIDGE

Output Current **90 A**



| V_{RRM} | V_{RSM} | P/N |
|-----------|-----------|----------|
| 400 | 500 | MTS90.04 |
| 600 | 700 | MTS90.06 |
| 800 | 900 | MTS90.08 |
| 1200 | 1300 | MTS90.12 |
| 1600 | 1700 | MTS90.16 |

Features

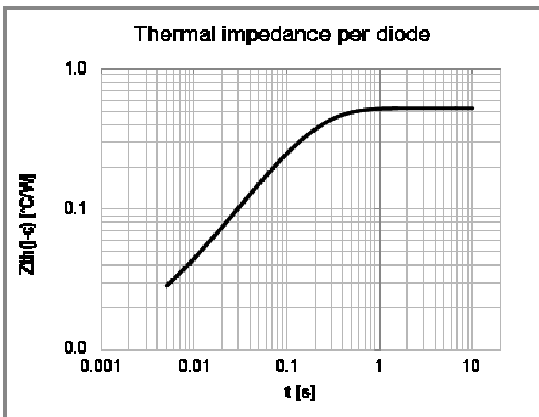
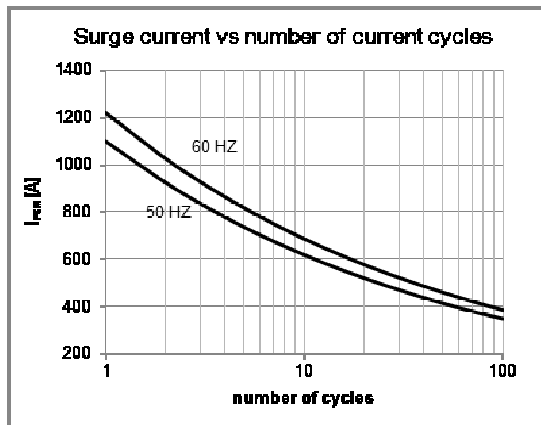
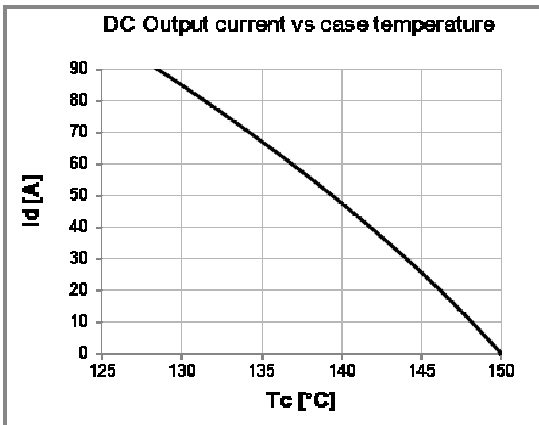
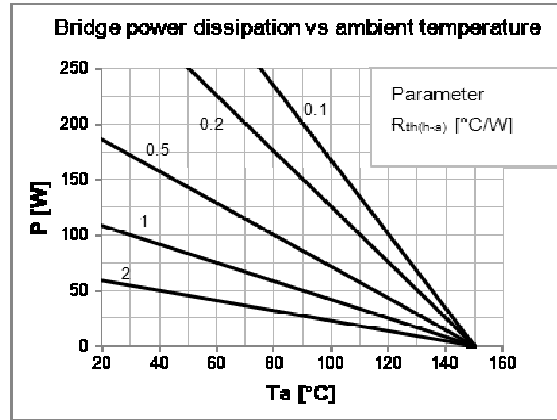
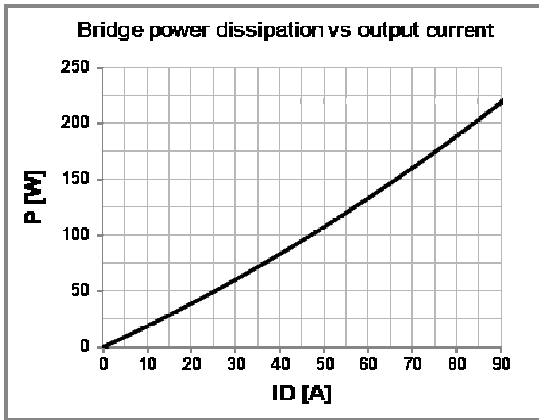
- Low forward voltage diodes for high surge capability
- Low thermal impedance packaging
- Electrically insulated case

Applications

- Input rectifier for variable frequency drives
- Battery charger rectifiers
- Single phase rectifier for power supplies
- Rectifiers for DC motor fields supplies

| Diodes characteristics | | Conditions | T_j [°C] | Value |
|------------------------|---------------------------------------|----------------------------------|------------|-----------------------|
| I_{RRM} | Max repetitive peak reverse current | $V = V_{RRM}$ | 150 | 4 mA |
| $V_{F(TO)}$ | Threshold voltage | | 150 | 0,9 V |
| r_F | Forward slope resistance | | 150 | 3,5 mΩ |
| V_{FM} | Peak forward voltage, max | $I_F = 100A$ | 25 | 1,2 V |
| I_{FSM} | Surge forward current | Half sine wave, 10 ms | 150 | 1100 A |
| I^2t | Max I^2t for fusing | | 150 | 6050 A ² s |
| T_{jmax} | Operating junction temperature | | | -40 / 150 °C |
| $R_{th(j-c)}$ | Thermal resistance (junction to case) | DC operation | | 0,53 °C/W |
| $R_{th(j-c)}$ | Thermal resistance (junction to case) | Rectangular wave 120° conduction | | 0,59 °C/W |

| Module characteristics | | Conditions | Value |
|------------------------|--|---|------------|
| I_D | DC output current | $T_c = 128$ °C | 90 A |
| I_D | DC output current | $T_a = 40$ °C ; freely suspended | 8 A |
| V_{INS} | RMS Insulating voltage | 50 / 60 Hz $t = 1$ s ($i < 1$ mA) | 3600 V |
| V_{INS} | RMS Insulating voltage | 50 / 60 Hz $t = 60$ s ($i < 1$ mA) | 3000 V |
| $R_{th(j-c)}$ | Thermal resistance (junction to case) | DC operation | 0,088 °C/W |
| $R_{th(j-c)}$ | Thermal resistance (junction to case) | Rect. wave 120° conduction | 0,098 °C/W |
| $R_{th(c-h)}$ | Thermal resistance (case to heatsink) | Mounting surface flat, smooth and greased | 0,100 °C/W |
| $R_{th(j-a)}$ | Thermal resistance (junction to ambient) | Freely suspended or mounted on an insulator | 8,5 °C/W |
| $R_{th(j-a)}$ | Thermal resistance (junction to ambient) | Mounted on a painted metal sheet 250x250x1 mm | 3,0 °C/W |
| T_{stg} | Max storage temperature | | 150 °C |
| W | Weight | | 97 g |
| M_1 | Mounting torque, ± 15 % | | 4,5 N·m |
| | | | 40 lb·inch |
| M_2 | Terminal connection torque, ± 15 % | | 3,0 N·m |
| | | | 26 lb·inch |



(dimensions in mm)

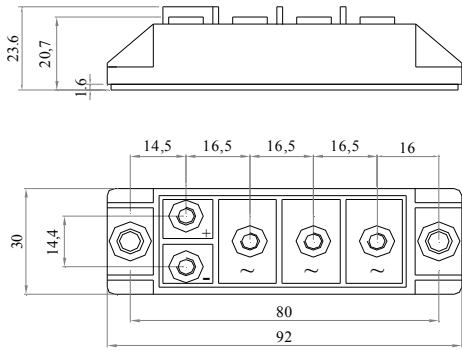


Fig.1 MTS90.04-SS5-FIX5-HP-P80-TA
Code:970000900003
MTS90.06-SS5-FIX5-HP-P80-TA
Code:970000900007
MTS90.08-SS5-FIX5-HP-P80-TA
Code:970000900011
MTS90.12-SS5-FIX5-HP-P80-TA
Code:970000900015
MTS90.16-SS5-FIX5-HP-P80-TA
Code:970000900019

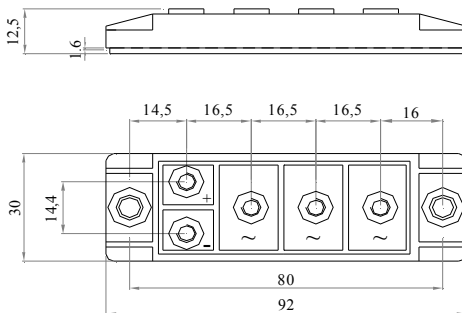


Fig.2 MTS90.04-SS5-FIX5-LP-P80-TA
Code:970000900002
MTS90.06-SS5-FIX5-LP-P80-TA
Code:970000900006
MTS90.08-SS5-FIX5-LP-P80-TA
Code:970000900010
MTS90.12-SS5-FIX5-LP-P80-TA
Code:970000900014
MTS90.16-SS5-FIX5-LP-P80-TA
Code:970000900018

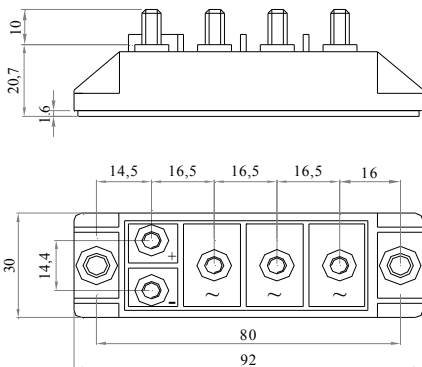


Fig.3 MTS90.04-MM5x10-FIX5-HP-P80-TA
Code:970000900001
MTS90.06-MM5x10-FIX5-HP-P80-TA
Code:970000900005
MTS90.08-MM5x10-FIX5-HP-P80-TA
Code:970000900009
MTS90.12-MM5x10-FIX5-HP-P80-TA
Code:970000900013
MTS90.16-MM5x10-FIX5-HP-P80-TA
Code:970000900017

Voltage:04=400V 06=600V 08=800V 12=1200V 16=1600V

Power fix:

SS=Screw (M5)
MM=Bolt (M5)

Mounting fix:

FIX= \varnothing 5,5

(dimensions in mm)

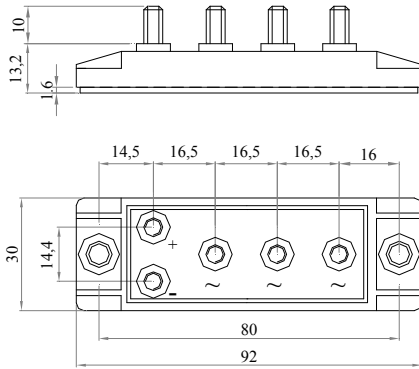


Fig.4

MTS90.04-MM5x10-FIX5-LP-P80-TA
Code:970000900000
MTS90.06-MM5x10-FIX5-LP-P80-TA
Code:970000900004
MTS90.08-MM5x10-FIX5-LP-P80-TA
Code:970000900008
MTS90.12-MM5x10-FIX5-LP-P80-TA
Code:970000900012
MTS90.16-MM5x10-FIX5-LP-P80-TA
Code:970000900016

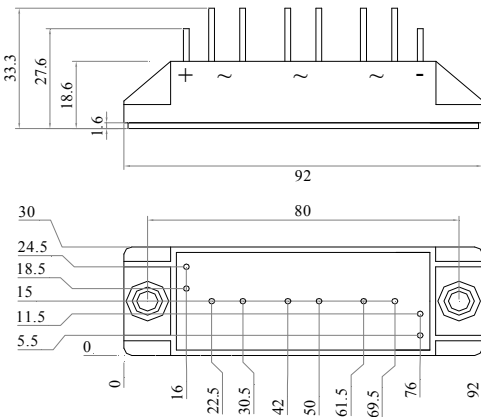


Fig.5

MTS90.04-LL-FIX5-HP-P80-TA
Code:970000900023
MTS90.06-LL-FIX5-HP-P80-TA
Code:970000900025
MTS90.08-LL-FIX5-HP-P80-TA
Code:970000900027
MTS90.12-LL-FIX5-HP-P80-TA
Code:970000900029
MTS90.16-LL-FIX5-HP-P80-TA
Code:970000900021

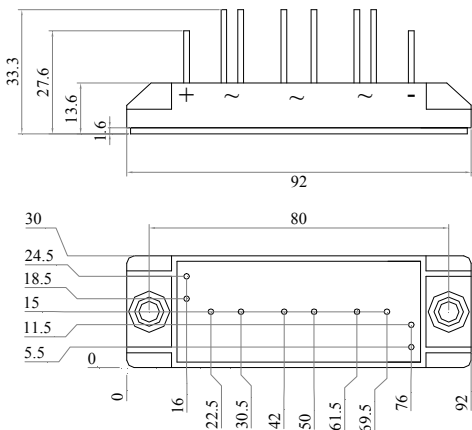


Fig.6

MTS90.04-LL-FIX5-LP-P80-TA
Code:970000900022
MTS90.06-LL-FIX5-LP-P80-TA
Code:970000900024
MTS90.08-LL-FIX5-LP-P80-TA
Code:970000900026
MTS90.12-LL-FIX5-LP-P80-TA
Code:970000900028
MTS90.16-LL-FIX5-LP-P80-TA
Code:970000900020

Voltage:04=400V 06=600V 08=800V 12=1200V 16=1600V

Power fix:

MM=Bolt (M5)
LL=Legs (Ø1,2)

Mounting fix:

FIX= Ø5,5